

CHAPTER 3

LIFE-LIMITED COMPONENTS

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CHAPTER 3

LIFE-LIMITED COMPONENTS

3.100 Life-Limited Components3.110 Time-In-Service Records

It is the operator's responsibility to maintain a record of time in service for the airframe, engine, and life-limited components. R22s are equipped with either an oil-pressure-activated hourmeter which records engine run time or a collective-activated hourmeter which records flight (collective up) time. Either method may be used to track time in service, however numerical values for service lives depend on the tracking method used (refer to § 3.300).

Calendar time in service for the airframe and engine begins on the date of the original RHC-issued Export (or Standard) Certificate of Airworthiness for the helicopter. For spares without a storage limit specified in § 23-85, calendar time in service begins on the date of the RHC-issued Airworthiness Approval Tag (Authorized Release Certificate) issued with the invoice.

If a component or an inspection is scheduled for hourly and calendar intervals, comply with whichever requirement comes first, then reset interval unless otherwise specified.

When installing a life-limited part or a part with an overhaul requirement, record in the helicopter maintenance record the installation date, part number, part name, serial number, helicopter total time, and time in service accumulated by part since new or since last overhaul, as applicable.

WARNING

Components with mandatory overhaul times or life limits whose time in service is not reliably documented cannot be considered airworthy and must be removed from service.

3.120 Fatigue Life-Limited Parts

The Airworthiness Limitations Section (ref. § 3.300) lists the mandatory replacement schedule for fatigue life-limited parts.

Listed items (ref. § 3.300) must be removed from the helicopter at the specified intervals and permanently retired from service, preferably by destroying or damaging each part so it cannot inadvertently be returned to service.

3.200 Type Certificate Data Sheet (TCDS)

TCDS is available at FAA Dynamic Regulatory System website: <https://drs.faa.gov>.

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3.300 Airworthiness Limitations

The Airworthiness Limitations Section is FAA approved and specifies inspections and other maintenance required under 14 CFR §§ 43.16 and 91.403, unless an alternative program has been FAA approved.

Time in service may be tracked based on engine run time or based on flight (collective up) time. Either method may be used, however numerical values for service lives depend on the tracking method used.

R22 Fatigue Life-Limited Parts

Use the following lives if time is tracked based on engine run time as recorded by an oil-pressure-activated hourmeter:

| <u>Part Number</u> | <u>Description</u> | <u>Maximum Service Life</u> |
|--|--|-------------------------------------|
| A016-2 (Retired by AD 2004-19-09) .. | Main Rotor Blade | 2200 Hours or 10 years ¹ |
| A016-4 and -6 | Main Rotor Blade | 2200 Hours or 12 years ¹ |
| A029-1 and -2 | Tail Rotor Blade | 2200 Hours or 12 years ¹ |
| A146-1 | Pinion, Main Gearbox (O-360 Engine) | 2200 Hours |
| A158-3 | Main Rotor Spindle | 2200 Hours |
| B545-1 | Gear Set, Tail Gearbox | 2200 Hours |
| B545-2 | Pinion, Tail Gearbox | 2200 Hours |
| NAS630-80 (or MS21250-10080) . . . | Coning Hinge Bolt | 2200 Hours |
| NAS1351-4-20 (or A722-1 or -2) | Pitch Horn Screws | 2200 Hours |
| NAS6604 (or NAS1304) | Tail Rotor Blade-to-Hub Attach Bolt . . . | 2200 Hours |
| A158-1 | Main Rotor Spindle | 2415 Hours ² |
| A020-2 | Upper Frame, Rev R & Prior | 4200 Hours |
| A020-2 and -90 | Upper Frame, Rev S & Subsequent | 4400 Hours |
| A023-1, -20, -22, and -23 | Tailcone Assembly | 4400 Hours |
| A047-1 and -6 | Upper Frame | 4400 Hours |
| A154-1 | Main Rotor Hub | 4400 Hours |
| B370-1 | Main Rotor Hub | 4400 Hours |
| A020-84 | Lower R.H. Frame | 5110 Hours |
| A046-2 | Lower R.H. Frame | 5110 Hours |
| A062-2 | Tail Rotor Hub | 6000 Hours |
| A030-1 | Tail Rotor Hub Assembly | 6260 Hours |

¹ Whichever limit occurs first. Calendar time starts on date of original RHC-issued Airworthiness Approval.

² Subject to AD 88-26-01 R2 compliance.

3.300 Airworthiness Limitations (continued)

R22 Fatigue Life-Limited Parts (continued)

Use the following lives if time is tracked based on flight (collective up) time as recorded by a collective-activated hourmeter:

| <u>Part Number</u> | <u>Description</u> | <u>Maximum Service Life</u> |
|--|---|-------------------------------------|
| A016-2 (Retired by AD 2004-19-09) . . | Main Rotor Blade | 1964 Hours or 10 years ¹ |
| A016-4 | Main Rotor Blade | 1964 Hours or 12 years ¹ |
| NAS630-80 (or MS21250-10080) . . . | Coning Hinge Bolt | 1964 Hours |
| NAS1351-4-20 (or A722-1 or -2) | Pitch Horn Screws | 1964 Hours |
| A158-1 | Main Rotor Spindle | 2156 Hours ² |
| A016-6 | Main Rotor Blade | 2200 Hours or 12 years ¹ |
| A029-1 and -2 | Tail Rotor Blade | 2200 Hours or 12 years ¹ |
| A146-1 | Pinion, Main Gearbox | 2200 Hours |
| A158-3 | Main Rotor Spindle | 2200 Hours |
| A188-2 | Sprag Clutch Assembly | 2200 Hours |
| A647-1 | Bearing, Main Rotor Shaft | 2200 Hours or 12 years ¹ |
| A647-6 | Bearing, Tail Rotor Pitch Control | 2200 Hours or 12 years ¹ |
| A647-8 | Bearing, Damper Assembly | 2200 Hours or 12 years ¹ |
| B545-1 | Gear Set, Tail Gearbox | 2200 Hours |
| B545-2 | Pinion, Tail Gearbox | 2200 Hours |
| NAS6604 (or NAS1304) | Tail Rotor Blade-to-Hub Attach Bolt | 2200 Hours |
| A020-2 | Upper Frame, Rev R & Prior | 3750 Hours |
| A154-1 | Main Rotor Hub | 3928 Hours |
| A020-2 and -90 | Upper Frame, Rev S & Subsequent | 4400 Hours |
| A020-84 | Lower R.H. Frame | 4400 Hours |
| A023-1, -20, -22, and -23 | Tailcone Assembly | 4400 Hours |
| A046-2 | Lower R.H. Frame | 4400 Hours |
| A047-1 and -6 | Upper Frame | 4400 Hours |
| A062-2 | Tail Rotor Hub | 4400 Hours |
| B370-1 | Main Rotor Hub | 4400 Hours |
| A030-1 | Tail Rotor Hub Assembly | 5589 Hours |

¹ Whichever limit occurs first. Calendar time starts on date of original RHC-issued Airworthiness Approval.

² Subject to AD 88-26-01 R2 compliance.

Approved By: *Ronald Atmire* Date: 3/16/18
for Manager, Federal Aviation Administration
 Los Angeles ACO Branch, AIR-790

FAA Approved: This and the previous page constitute the Airworthiness Limitations Section in its entirety, are considered segregated from the rest of the document, and set forth the FAA-approved mandatory replacement times for fatigue life-limited parts.